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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,962	07/30/2003	Fabio Perini	71071	1772

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EXAMINER	
KINNEY, ANNA L	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/630,962	PERINI, FABIO	
	Examiner	Art Unit	
	Anna Kinney	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-14,16-20 and 28-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-14,16-20 and 28-31* is/are rejected.

7)☒ Claim(s) *1, 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

In view of new prior art, the Examiner must withdraw the indication of allowable matter made in the previous Office Action.

Claim Objections

Claims 1 and 31 are objected to because of the following informalities: in claim 1, the Examiner suggests that the applicant move the word "and" from the beginning of line 6 of the claim to the end of line 7 of the claim, in claim 31, the Examiner suggests deleting the word "and" from the beginning of line 6 of the claim, and in both claims, the Examiner suggests changing the comma at the end of line 5 to a semicolon. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8, 11-14, 17, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth (U.S. Patent 3,201,066) in view of Hietala et al (Arto Hietala and Noel Kuck, "Flakt Trimco Trim-conveying System", TAPPI 90 Proc. (Atlanta), Mar. 5-8, 1990, pp. 181-184).

With respect to claim 31, Danforth discloses a pulper device (Figure 2, item 47) for waste paper material, characterized in that it comprises: a container (Figure 3, item

60) for collecting said waste, having an inlet opening (Figure 3, item 57) for said waste; at least one pressurized water nozzle (Figure 4, item 98) which produces a jet of water which intercepts the waste which falls into said container; and a first pump (Figure 3, item 116) which removes the water and the waste from said container. Danforth does not disclose expressly that the container has a suction duct connected to it.

Hietala et al discloses a pulper device for waste paper material (pg. 181, col. 1, "Abstract", lines 1-9), characterized in that it comprises a container (Fig. 2, item 5) for collecting said waste, having an inlet opening for said waste (pg. 182, col. 1, "Integrated Double Separator and Pulper" section, ¶ 1); at least one water nozzle which produces a jet of water which intercepts the waste which falls into said container (Fig. 1, top right of figure); a first pump (Fig. 2, item 13) which removes the water and the waste from said container; and a suction duct connected to said container and which sucks air from inside said container (Fig. 2, items 1 and 2).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a suction duct as described by Hietala in the pulper of Danforth to obtain the invention as specified in claim 31.

The motivation would have been to maintain a constant vacuum inside the pulper (pg. 181, col. 2, "The Ductwork" section, ¶ 1), and that the pulper needs no general exhaust and prevents dust and moisture from spreading into the machine hall (pg. 183, col. 1, "Conclusions" section, ¶ 3).

With respect to claim 8, Danforth discloses that said container has an elongated longitudinal extension, the inlet opening extending in the longitudinal direction of extension of said container (Figure 5 and col. 3, lines 8 to 11).

With respect to claim 11, Danforth discloses a bypass line between the container outlet and the first pump.

Hietala discloses a recirculation duct (Figure 2, item 9) between said first pump (Figure 2, item 13) and the container (Figure 2, item 5), by means of which a part of the flow sucked in by said first pump is recirculated inside said container.

With respect to claim 12, Hietala discloses that the outlet of said recirculation duct (Figure 2, item 9) is situated in a position approximately opposite an intake opening of said first pump (Figure 2, item 13).

With respect to claim 13, Danforth discloses the elongated longitudinal nature of the container (see the 103(a) rejection, above).

Hietala discloses that the outlets of said recirculation duct (Figure 2, item 9) are arranged approximately at the ends of the container (Figure 2, top), and the Examiner construes the placement of the intake opening of said first pump (Fig. 2,bottom) to also be at the end of the container.

With respect to claim 14, Danforth discloses that the bottom of said container is inclined downwardly toward the intake opening of said first pump (col. 3, lines 22 to 24).

Hietala discloses that the bottom of said container is inclined downwardly (Fig. 2, bottom) from the outlet of said recirculation duct (Fig. 2, top) toward the intake opening of said first pump (Fig. 2, item 13).

With respect to claim 17, Hietala discloses that the suction duct (Fig. 2, items 1 and 2) is connected to a separator (Fig. 2, item 6) for separating air from solid and liquid particles entrained in the air flow (pg. 182, col. 1, last ¶).

Claims 1, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth and Hietala et al as applied to claims 31 and 11 above, and further in view of Vaughan (U.S. Patent 3,973,866).

With respect to claim 1, Danforth and Hietala do not disclose expressly that the first pump is a chopper pump.

Vaughan discloses a chopper pump for use with wood pulp (col. 1, lines 6-29).

Danforth, Hietala, and Vaughan are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a chopper pump as described by Vaughan in the pulper of Danforth and Hietala to obtain the invention as specified in claim 1. The motivation would have been to pump thick slurry without the pump clogging or losing its prime and without the slurry being dewatered (col. 1, lines 47-50).

With respect to claim 28, Vaughan discloses that said chopper pump both pulverizes the waste paper material in the water, and pumps the water and waste paper material simultaneously (col. 1, lines 6-11).

With respect to Claim 29, Hietala is applied as in the rejection to claim 11, above.

Claims 31, 2, 4/2, 5/4/2, 6/4/2, 7/4/2, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doelle et al (U.S. Patent 6,358,367) in view of Hietala.

With respect to claim 31, Doelle et al discloses a pulper device (Figure 3, item 76) for waste paper material, characterized in that it comprises: a container (Figure 3, item 76) for collecting said waste, having an inlet opening (Figure 3, item 66) for said waste; at least one pressurized water nozzle (Figure 3, item 74) which produces a jet of water which intercepts the waste which falls into said container, and a first pump (Figure 2, item 32) which removes the water and the waste from said container.

Hietala is applied as in the rejection to claim 31, above.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a suction duct as described by Hietala in the pulper of Doelle et al to obtain the invention as specified in claim 31. The motivation is provided in the rejection to claim 31, above.

With respect to claim 2, Doelle et al discloses that it comprises a first series (Figure 3, item 74) of pressurized water nozzles and a second series (col. 4, lines 20 to 23) of pressurized water nozzles, the jets produced by the nozzles of the first series and the nozzle jets produced by the second series having trajectories which intersect in a zone where said waste falls (Figure 3).

With respect to claim 4/2, Doelle et al discloses that two inclined surfaces (Figure 3) for guiding the jets produced by the nozzles are associated with said first series (Figure 3, item 74) and said second series (Figure 3, item 74) of nozzles.

With respect to claim 5/4/2, Doelle et al discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

With respect to claim 6/4/2, Doelle et al discloses that each of said surfaces extends from the respective series of nozzles as far as a respective terminal edge (Figure 3), the terminal edges of said two surfaces delimiting a passage for conveying the water and the waste paper material.

With respect to claim 7/4/2, Doelle et al discloses that said surfaces are flat (Figure 3).

With respect to claim 9, Doelle et al discloses that said container has an elongated upper opening (Figure 3), parallel to which said first and said second series of nozzles (Figure 3, items 74) extend.

Claims 3, 4/3, 5/4/3, 6/4/3, and 7/4/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doelle and Hietala et al, as applied to claims 31 and 2 above, and further in view of Chupka et al (U.S. Patent 5,582,686).

With respect to claim 3, Doelle et al and Hietala do not disclose expressly that said nozzles have trajectories with different inclinations.

Chupka et al discloses that nozzles have trajectories with different inclinations (col. 3, lines 37 to 45).

With respect to claim 4/3, Doelle et al discloses that two inclined surfaces (Figure 3) for guiding the jets produced by the nozzles are associated with said first series (Figure 3, item 74) and said second series (Figure 3, item 74) of nozzles.

Chupka et al also discloses that two inclined surfaces (Figure 3, item 18) for guiding the jets produced by the nozzles (Figure 3, items 17 and 55) are associated with

said first series (Figure 3, items 33a and 34 a) and said second series (Figure 3, items 33 and 34) of nozzles.

With respect to claim 5/4/3, Doelle et al discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

Chupka et al also discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

With respect to claim 6/4/3, Doelle et al discloses that each of said surfaces extends from the respective series of nozzles as far as a respective terminal edge (Figure 3), the terminal edges of said two surfaces delimiting a passage for conveying the water and the waste paper material.

With respect to claim 7/4/3, Doelle et al discloses that said surfaces are flat (Figure 3).

Doelle, Hietala, and Chupka are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the different jet trajectories of Chupka to the pulping system of Doelle to obtain the invention as specified in claims 3, 4/3, 5/4/3, 6/4/3, and 7/4/3.

The motivation for doing so would have been to allow the jets relatively reciprocating movement (col. 3, lines 3 to 6).

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth and Hietala, as applied to claim 31, above, in view of Heiskanen et al (E.P. Patent Application 1 010 804 A1).

With respect to claim 18, Danforth and Hietala do not disclose expressly a thickening station to which at least partly the mixture of water and waste paper material sucked by said first pump is conveyed and inside which the solid content of the mixture is increased, eliminating therefrom a part of the water content.

Heiskanen et al discloses a thickening station (Figure 3, item 36) to which at least partly the mixture of water and waste paper material is conveyed (Figure 3, item 33) and inside which the solid content of the mixture is increased, eliminating therefrom a part of the water content (Figure 3, item 48).

Danforth, Hietala, and Heiskanen et al are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add a thickening station as described by Heiskanen et al, to the broke pulper of Danforth and Hietala, to obtain the invention as specified in claim 18.

The motivation for doing so would have been that low broke consistency requires huge buffer tanks which increase the time needed for changes of grade and complicate the regulation of the process, as well as add space requirements, big investments, and slow water circulations (col. 1, line 36 to col. 2, line 2); and because breaks in the production process and sometimes long discontinuous process stages must be prepared for beforehand (col. 1, lines 37 to 42).

With respect to claim 19, Hietala discloses a recirculation duct (Fig. 2, item 9) connected to the first pump (Fig. 2, item 13) and the container (Fig. 2, item 5), as applied to claim 18, above; and a second pump. Hietala does not disclose expressly that the second pump conveys the first portion of the flow sucked by said first pump toward said thickening station, or that it is arranged along the delivery duct of said first pump.

Heiskanen et al discloses that a second pump (Figure 1, item 22), which conveys waste material and water removed from the container (Fig. 1, item 10) and sucked by said first pump (Figure 1, item 20), toward said thickening station (Figure 1, item 16), is arranged along the delivery duct of said first pump (Figure 1, item 20).

With respect to claim 20, Danforth and Hietala do not disclose that the mixture leaving said thickening station is conveyed to another container for subsequent conveying to a headbox associated with the paper production line and the water separated from said mixture is recycled.

Heiskanen et al discloses that the mixture leaving said thickening station (Figure 3, item 36) is conveyed to another container (Figure 3, item 38) for subsequent conveying to a headbox associated with the paper production line and that the water separated from said mixture (Figure 3, item 48) is recycled (Figure 3; and Figure 2, item 44).

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth, Hietala, and Vaughan, as applied to claim 29 above, and further in view of Doelle.

With respect to claim 30, Doelle is applied as in the rejection of claim 2, above. Doelle further discloses that the jets exert a pulping action on the waste (col. 4, lines 18-25).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Kinney whose telephone number is (571) 272-8388. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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